

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Cynthia B. ROBINSON, et al.

Serial Number: 10/698,071

Filing Date: October 29, 2003

Title: COMBINATION OF  
DEHYDROEPIANDROSTERONE OR  
DEHYDROEPIANDROSTERONE-  
SULFATE WITH A TYROSINE KINASE,  
INHIBITOR, DELTA OPIOID RECEPTOR  
ANTAGONIST, NEUROKININ  
RECEPTOR ANTAGONIST, OR VCAM  
INHIBITOR FOR TREATMENT OF  
ASTHMA OR CHRONIC OBSTRUCTIVE  
PULMONARY DISEASE

Group Art Unit: 1617

Examiner: Umamaheswari Ramachandran

CONFIRMATION NO: 9181

FILED ELECTRONICALLY ON: July 12, 2007

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.97**

Sir:

Applicants hereby submit an Information Disclosure Statement along with attached form PTO/SB/08. A copy of each listed publication is submitted, if required, pursuant to 37 CFR §§1.97-1.98, as indicated below.

Applicants respectfully request that the listed information be considered by the Examiner and be made of record in the above-identified application. Applicants further request that the Examiner initial and return the attached form PTO/SB/08 in accordance with MPEP §609.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, prior art or material to patentability as defined in §1.56.

A. ☒ 37 CFR §1.97(b). This Information Disclosure Statement should be considered by the Office because:

- ☐ (1) It is being filed within 3 months of the filing date of a national application and is other than a continued prosecution application under §1.53(d);  
-- OR --
- ☐ (2) It is being filed within 3 months of entry of the national stage as set forth in §1.491 in an international application;  
-- OR --
- ☒ (3) It is being filed before the mailing of a first Office action on the merits;  
-- OR --
- ☐ (4) It is being filed before the mailing of a first Office action after the filing of a request for continued examination under §1.114.

B. ☐ 37 CFR §1.97(c). Although this Information Disclosure Statement is being filed after the period specified in 37 CFR §1.97(b), above, it is filed before the mailing date of the earlier of (1) a final office action under §1.113, (2) a notice of allowance under §1.311, or (3) an action that otherwise closes prosecution on the merits, this Information Disclosure Statement should be considered because it is accompanied by one of:

- ☐ a statement as specified in §1.97(e) provided concurrently herewith;  
-- OR --
- ☐ a fee of \$180.00 as set forth in §1.17(p) authorized below, enclosed, or included with the payment of other papers filed together with this statement.

C. ☐ 37 CFR §1.97(d). Although this Information Disclosure Statement is being filed after the mailing date of the earlier of (1) a final office action under §1.113 or (2) a notice of allowance under §1.311, it is being filed before payment of the issue fee and should be considered because it is accompanied by:

- i. a statement as specified in §1.97(e);  
-- AND --
- ii. a fee of \$180.00 as set forth in §1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this Statement.

D. ☐ 37 CFR §1.97(e). Statement.

- ☐ A statement is provided herewith to satisfy the requirement under 37 CFR §§1.97(c);  
-- AND/OR --
- ☐ A statement is provided herewith to satisfy the requirement under 37 CFR §§1.97(d);  
-- AND/OR --
- ☐ A copy of a dated communication from a foreign patent office clearly showing that the information disclosure statement is being submitted within 3 months of the filing date on the communication is provided in lieu of a statement under 37 C.F.R. § 1.97(e)(1) as provided for under MPEP 609.04(b) V.

E. ☐ *Statement Under 37 C.F.R. §1.704(d)*. Each item of information contained in the information disclosure statement was first cited in a communication from a foreign patent office in a counterpart application that was received by an individual designated in § 1.56(c) not more than thirty (30) days prior to the filing of this information disclosure statement. This statement is made pursuant to the requirements of 37 C.F.R. §1.704(d) to avoid reduction of the period of adjustment of the patent term for Applicant(s) delay.

F. ☒ *37 CFR §1.98(a)(2)*. The content of the Information Disclosure Statement is as follows:

☐ Copies of each of the references listed on the attached Form PTO/SB/08 are enclosed herewith.

-- OR --

☒ Copies of U.S. Patent Documents (issued patents and patent publications) listed on the attached Form PTO/SB/08 are NOT enclosed.

-- AND/OR --

☒ Copies of Foreign Patent Documents and/or Non Patent Literature Documents listed on the attached Form PTO/SB/08 are enclosed in accordance with 37 CFR §1.98 (a)(2).

-- AND/OR --

☒ Copies of pending unpublished U.S. patent applications are enclosed in accordance with 37 CFR §1.98(a)(2)(iii).

G. ☐ *37 CFR §1.98(a)(3)*. The Information Disclosure Statement includes non-English patents and/or references.

☐ Pursuant to 37 CFR §1.98(a)(3)(i), a concise explanation of the relevance of each patent, publication or other information provided that is not in English is provided herewith.

☐ Pursuant to MPEP 609(B), an English language copy of a foreign search report is submitted herewith to satisfy the requirement for a concise explanation where non-English language information is cited in the search report.

-- OR --

☐ A concise explanation of the relevance of each patent, publication or other information provided that is not in English is as follows: \_\_\_\_\_

☐ Pursuant to 37 CFR §1.98(a)(3)(ii), a copy of a translation, or a portion thereof, of the non-English language reference(s) is provided herewith.

H. ☐ *37 CFR §1.98(d)*. Copies of patents, publications and pending U.S. patent applications, or other information specified in 37 C.F.R. § 1.98(a) are not provided herewith because:

☐ Pursuant to 37 CFR §1.98(d)(1) the information was previously submitted in an Information Disclosure Statement for another application under which this application claims priority for an earlier effective filing date under 35 U.S.C. 120.

Application in which the information was submitted: \_\_\_\_\_

Information Disclosure Statement(s) filed on: \_\_\_\_\_

AND

☐ The information disclosure statement submitted in the earlier application complied with paragraphs (a) through (c) of 37 CFR §1.98.

- I. ☒ *Fee Authorization.* The Commissioner is hereby authorized to charge the above-referenced fees of \$0.00 and charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 23-2415 (Docket No. 30775-719.201).

Respectfully submitted,

WILSON SONSINI GOODRICH & ROSATI

Dated: July 12, 2007

650 Page Mill Road  
Palo Alto, CA 94304-1050  
(650) 493-9300  
Customer No. 021971

By: Albert P. Halluin  
Albert P. Halluin, Reg. No. 25,227

Under the paperwork Reduction Act of 1995, no persons required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	10/698,071	
			Filing Date	October 29, 2003	
			First Named Inventor	Cynthia B. Robinson	
			Art Unit	1617	
Examiner Name	Umamaheswari Ramachandran				
Sheet	1	Of	3	Attorney Docket Number	30775-719.201

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	US 2004/0067920	04/08/2004	Leonard et al.	
	2.	US 2004/0082522	04/29/2004	Hui	
	3.	US 2005/0026850 A1	02/03/2005	Robinson et al.	
	4.	US 4,501,729	02/26/1985	Boucher et al.	
	5.	US 4,956,355	09/11/1990	Prendergast	
	6.	US 5,527,789	06/18/1996	Nyce	
	7.	US 5,660,835	08/26/1997	Nyce	
	8.	US 5,859,000	01/12/1999	Dowell et al.	
	9.	US 6,087,351	07/11/2000	Nyce	
	10.	US 6,479,666	11/12/2002	Hull et al.	
	11.	US 6,635,629	10/21/2003	Raymond et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>2</sup> - Number <sup>2</sup> - Kind Code <sup>3</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>4</sup>
	12.	EP 429,187 B1	05/29/1991	Bourke et al.		
	13.	EP 934,745 A1	08/11/1999	Kennedy		
	14.	GB 2,240,472 A	08/07/1991	Masterson		
	15.	WO 1991/04030 A1	04/04/1991	Daynes et al.		
	16.	WO 1996/25935 A1	08/29/1996	Nyce		

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the paperwork Reduction Act of 1995, no persons required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	10/698,071	
			Filing Date	October 29, 2003	
			First Named Inventor	Cynthia B. Robinson	
			Art Unit	1617	
			Examiner Name	Umamaheswari Ramachandran	
Sheet	2	Of	3	Attorney Docket Number	30775-719.201

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>6</sup>
	17.	ABOU-GHARBIA, et al. Synthesis of dehydroepiandrosterone sulfate and 16 alpha-halogenated steroids. J Pharm Sci. 1981; 70(10): 1154-7.		
	18.	FOLKERS, et al. Lovastatin decreases coenzyme Q levels in humans. Proc Natl Acad Sci U.S.A. 1990; 87(22): 8931-4.		
	19.	GREENBERG, et al. Co-enzyme Q10: a new drug for cardiovascular disease. J Clin Pharm. 1990; 30(7): 596-608		
	20.	HARTIALA, et al. Testosterone metabolism in dog lung in vitro. Steroids Lipids Res. 1973; 4(1): 17-23.		
	21.	ISHIHARA, et al. Gas chromatographic determination of degradation products and stability of dehydroepiandrosterone sulfate in aqueous solution. Drug Dev Indust Pharm. 1979; 5(3): 263-75.		
	22.	MILEWICH, et al. Androstenedione metabolism in human lung fibroblasts. J Steroid Biochem. 1986; 24(4): 893-7.		
	23.	MILEWICH, et al. Metabolism of androsterone and 5 alpha-androstane-3 alpha, 17 beta-diol in human lung tissue and in pulmonary endothelial cells in culture. J Clin Endocrinol Metab. 1985; 60(2): 244-50.		
	24.	MILEWICH, et al. Metabolism of dehydroisoandrosterone and androstenedione by the human lung in vitro. J Steroid Biochem. 1977; 8(4): 277-84.		
	25.	MILEWICH, et al. Metabolism of dehydroisoandrosterone and androstenedione in human pulmonary endothelial cells in culture. J Clin Endocrinol Metab. 1983; 56(5): 930-5.		
	26.	MILEWICH, et al. Testosterone metabolism by human lung tissue. J Steroid Biochem. 1978; 9(1): 29-32.		

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is so file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the paperwork Reduction Act of 1995, no persons required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/698,071
				Filing Date	October 29, 2003
				First Named Inventor	Cynthia B. Robinson
				Art Unit	1617
				Examiner Name	Umamaheswari Ramachandran
Sheet	3	Of	3	Attorney Docket Number	30775-719.201

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	27.	MOHAN, et al. Dehydroepiandrosterone and related steroids inhibit mitochondrial respiration in vitro. Int J Biochem. 1989; 21(10): 1103-7.	
	28.	MORTENSEN, et al. Coenzyme Q10: Clinical benefits with biochemical correlates suggesting a scientific breakthrough in the management of chronic heart failure. Int J Tissue React. 1990; 12(3): 155-62.	
	29.	PONGRÁČZ, et al. Capillary gas chromatography of urinary steroids of terbutaline-treated asthmatic children. Chromatographia. 1998; 48(1-2): 163-5.	

UNPUBLISHED PATENT APPLICATIONS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	30.	LEONARD, et al. US Patent Application No. 10/462,927, entitled "Dihydrate dehydroepiandrosterone and methods of treating asthma or chronic obstructive pulmonary disease using compositions thereof," filed June 17, 2003. (WSGR Reference No. 30775-722.201)	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.